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UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE

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REPLY TO: 3430 Biological Evaluation

May 12, 1980

SUBJECT: Sleighville House Area Evaluation

TO: Forest Supervisor, Tahoe N.F.

On April 30 Mike Srago, a plant pathologist on our staff, met with Dave Thomas, district silviculturalist, to examine a stand of densely stocked ponderosa pine in the Sleighville House Area. The stand has a history of frequent tree mortality. The objective of the evaluation was to determine if Fomes annosus was causing the mortality.

Observations:

There were scattered, down trees throughout the stand. Most of the down trees had broken off the stump 1-3 feet above the ground. A brown cubicle rot was associated with 90% of the stumps examined. This rot was probably caused by a secondary fungus that colonized the trees after they died. There was no evidence of F. annosus.

Also scattered throughout the stand were groups of recently killed ponderosa pine. Evidence of western pine beetle was found in these trees.

Discussion and Options:

The major organism associated with the mortality in the area evaluated is the western pine beetle. This bark beetle breeds in ponderosa and Coulter pine. The beetle attacks the main stem of living trees and generally will not breed in slash, branches or trees less than 6 inches in diameter. There are generally 2-3 overlapping generations per year in the area evaluated and some adult beetles probably are active in the area during most of the snow-free period.

Normally the western pine beetle breeds in trees which are stressed or in a state of low vigor because they are overmature or have been weakened by predisposing factors such as root rots, dwarf mistletoe, drought, overstocking and fire. This beetle has an aggregating pheromone which serves to attract other western pine beetles into the area of a tree under attack.

It is the high stocking levels in this stand that are putting the trees under stress and predisposing them to attack by western pine beetle.

If nothing is done to reduce the stocking level of this area there will be continued mortality. There are, however, management strategies that can effectively reduce the mortality caused by this bark beetle.

Option 1: Reduce the Stocking to Levels Suggested by the Tahoe Desired Table.

When the Tahoe Desired Table was developed, insects and diseases were not considered. Therefore, the suggested stocking levels for this site, 261 sq. ft./acre, probably would remain too high to significantly reduce the mortality caused by bark beetles.

Option 2: Reduce the Stocking Level to 200 sq.ft./acre.

This option was discussed with John Fiske and Glenn Davies, silviculturalists on the Timber Management Staff. They felt that this stocking level would leave adequate stocking for the site. At the same time it would significantly reduce the probability of bark beetle-caused mortality in this stand.

If there are any questions concerning this evaluation please contact Mike Srago.

Wilfred L. Freeman, Jr.

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